

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of the Claims

1. (Currently Amended) A plurality of overlapping snack pieces comprising:
 - a. a ~~non-planar~~ concave-curved snack piece having a surface including random surface features extending from said surface;
 - b. wherein said plurality of overlapping snack pieces have a volumetric bulk density of greater than about $8.0 \times 10^{-5} \text{ g/mm}^3$.
2. (Original) A plurality of overlapping snack pieces according to claim 1, wherein said plurality of overlapping snack pieces are in a nested arrangement.
3. (Original) A plurality of overlapping snack pieces according to claim 1, wherein said volumetric bulk density is from about $8.0 \times 10^{-5} \text{ g/mm}^3$ to about $80 \times 10^{-5} \text{ g/mm}^3$.
4. (Canceled).
5. (Currently Amended) A plurality of overlapping snack pieces according to claim 4 1, wherein said snack piece has a bowl-shaped curvature.
6. (Original) A plurality of overlapping snack pieces according to claim 1, wherein said body a segment of a sphere cap.
7. (Original) A plurality of overlapping snack pieces according to claim 5, wherein said snack piece has a radius of curvature from about 5 mm to about 500 mm.
8. (Original) A plurality of overlapping snack pieces according to claim 1, wherein said snack piece has a modulus of elasticity from about 0.1 g/mm^2 to about 6.0 g/mm^2 .
9. (Original) A plurality of overlapping snack pieces according to claim 2, wherein said snack piece having a maximum thickness from about 2.5 mm to about 5.5 mm.
10. (Original) A plurality of overlapping snack pieces according to claim 1, wherein said snack piece contains a lipid content from about 18% to about 40%.
11. (Original) A plurality of overlapping snack pieces according to claim 1, wherein said snack piece has a density from about $1.0 \times 10^{-4} \text{ g/mm}^3$ to about $17 \times 10^{-4} \text{ g/mm}^3$.
12. (Original) A plurality of overlapping snack pieces according to claim 1, wherein each of said snack pieces in said plurality of overlapping snack pieces are consistent in size and shape.

13. (Original) A plurality of overlapping snack pieces according to claim 1, wherein said snack piece is contained in a package.
14. (Previously Presented) A plurality of overlapping snack pieces according to claim 13, wherein said plurality of overlapping snack pieces is placed in a package, said package having a packed bulk density from about $10 \times 10^{-5} \text{ g/mm}^3$ to about $35 \times 10^{-5} \text{ g/mm}^3$.
15. (Original) A plurality of overlapping snack pieces comprising:
 - a. a non-planar snack piece has a concave curvature;
 - b. wherein said plurality of overlapping snack pieces have a volumetric bulk density of greater than about $8.0 \times 10^{-5} \text{ g/mm}^3$.
16. (Previously Presented) A plurality of overlapping snack pieces according to claim 15, wherein said snack piece has a bowl-shaped curvature.
17. (Previously Presented) A plurality of overlapping snack pieces according to claim 15, wherein said snack piece is a segment from a sphere cap.
18. (Previously Presented) A plurality of overlapping snack pieces according to claim 15, wherein said volumetric bulk density is from about $8.0 \times 10^{-5} \text{ g/mm}^3$ to about $80 \times 10^{-5} \text{ g/mm}^3$.
19. (Previously Presented) A plurality of overlapping snack pieces according to claim 15, wherein said snack piece having a lipid content from about 18% to about 40%.
20. (Previously Presented) A plurality of overlapping snack pieces according to claim 15, wherein said plurality of overlapping snack pieces is placed in a package, said package having a packed bulk density from about $10 \times 10^{-5} \text{ g/mm}^3$ to about $35 \times 10^{-5} \text{ g/mm}^3$.
21. (Currently Amended) A plurality of overlapping snack pieces comprising:
 - a. a non-planar snack piece that is concave-curved having a maximum thickness greater than about 2.5 mm;
 - b. wherein said plurality of overlapping snack pieces have a volumetric bulk density of greater than about $8.0 \times 10^{-5} \text{ g/mm}^3$.
22. (Previously Presented) A plurality of overlapping snack pieces according to claim 21, wherein said snack piece having a lipid content from about 18% to about 40%.
23. (Previously Presented) A plurality of overlapping snack pieces comprising:
 - a. a non-planar snack piece having a concave curvature;
 - b. wherein said plurality of overlapping snack pieces is placed in a package, said package having a packed volumetric bulk density ranging from about $10 \times 10^{-5} \text{ g/mm}^3$ to about $35 \times 10^{-5} \text{ g/mm}^3$.

24. (Withdrawn) A plurality of overlapping snack pieces comprising:
 - a. a non-planar snack piece having a surface including random surface features extending from said surface;
 - b. wherein said plurality of overlapping snack pieces have a linear bulk density of greater than about 0.4 g/mm^3 .
25. (Withdrawn) A plurality of overlapping snack pieces according to claim 25, wherein said snack piece has a concave curvature.
26. (Withdrawn) A plurality of overlapping snack pieces according to claim 26, wherein said snack piece has a bowl-shaped curvature.
27. (Withdrawn) A plurality of overlapping snack pieces according to claim 27, wherein said body a segment of a sphere cap.
28. (Currently Amended) A plurality of overlapping snack pieces comprising:
 - a. a concave-curved snack piece having a lipid content of less than about 23% by weight of the snack piece;
 - b. wherein said plurality of overlapping snack pieces have a volumetric bulk density from about $8.0 \times 10^{-5} \text{ g/mm}^3$ to about $80 \times 10^{-5} \text{ g/mm}^3$.
29. (Previously Presented) A plurality of overlapping snack pieces according to claim 28, wherein said plurality of overlapping snack pieces is placed in a package, said package having a packed volumetric bulk density from about $10 \times 10^{-5} \text{ g/mm}^3$ to about $35 \times 10^{-5} \text{ g/mm}^3$.
30. (Withdrawn) A method for making a high bulk density plurality of overlapping thick snack pieces, said method comprising the steps of:
 - a. controlling the radius of curvature of the chip by placing a dough piece of said snack piece adjacent to predetermined curved restraining device having a radius of curvature from 5 mm to about 500 mm;
 - b. cooking said dough piece while said dough piece is restrained by said curved restraining device until said dough piece transforms into said final snack piece having a surface wherein random surface features extend from said surface; and
 - c. placing said snack piece adjacent to other of said snack pieces to form said plurality of overlapping snack pieces, wherein said plurality of overlapping snack pieces having a volumetric bulk density greater than $8.0 \times 10^{-5} \text{ g/mm}^3$.

REMARKS

State of the Claims

Claims 1-23, 28 and 29 are pending. Claim 4 has been canceled without prejudice. Claims 1, 21 and 28 have been amended. Support for the amendments can be found on page 11, lines 29-30 of the specification. No new matter has been added.

35 U.S.C. § 102 Rejection

Claims 1-4, 10, 12-15 and 23 stand rejected under 35 U.S.C. § 102(a) as being anticipated by Applicants' Admitted Prior Art (namely, Pringles® potato crisps, plain and with ridges).¹ Claim 4 has been canceled without prejudice.

The Examiner states that the AAPA teaches non-planar snack pieces in a nested arrangement having a volumetric bulk density of between 26 to $59 \times 10^{-5} \text{ g/mm}^3$, and a package volumetric bulk density of between 13 to $20 \times 10^{-5} \text{ g/mm}^3$. Also, the Examiner states that the snack pieces are concave, have similar shape and size, and a fat content of 38%.² The Examiner asserts that the snack pieces would have inherently overlapped when packaged and possessed some degree of surface randomness.

According to MPEP § 2131 a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. The identical invention must be shown in as complete detail as is contained in the claim. The elements must be arranged as required by the claim.

Applicants respectfully assert that the Examiner's rejection is in error. First, the snack pieces of the AAPA are not concave. Rather, they are saddle-shaped. Applicants' snack piece, however, is bowl-shaped or concave-curved.³ Though curved, the snack pieces of the AAPA are not concave and neither are they bowl-shaped. Also, Applicants believe that the Examiner relies on his own personal knowledge when he asserts that the snack pieces of the AAPA possessed some degree of surface randomness. In so asserting, the Examiner has not provided a basis for such within the AAPA, and thus Applicants disagree with this assertion. Also, the Examiner admits that "ridges are not random surface features themselves", but asserts that random surface features are apparent "when viewed closely enough." Applicants respectfully assert that this

¹ Applicants' Specification at page 8, lines 19-32).

² Id. at page 8, lines 19-32.

³ Id. at page 11, lines 29-30.

statement is without basis in the AAPA and is therefore derived from the Examiner's personal knowledge.

If Applicants traverse an assertion made by the Examiner, the Examiner should cite a reference in support of his position.⁴ When a rejection is based on facts within the personal knowledge of the Examiner, the data should be stated as specifically as possible, and the facts must be supported, when called for by the Applicant, by an affidavit from the Examiner.⁵ If the Examiner fails to provide a suitable affidavit that bolsters his reasons for rejection herein, the rejection should be withdrawn. Applicants so traverse the Examiner's rejection based upon these grounds.

In the Examiner's Response to Arguments section of his office action noted herein, the Examiner makes several assertions about the AAPA that, in Applicants' view, require answer in this portion of Applicants' response. For example, the Examiner asserts that Applicants' specification did not include any particular definition for random surface features. This assertion is in not true. At page 21, lines 1-4, Applicants state the following:

The surface features are visibly recognizable as bubble or blister surfaces rising above the base surface of the snack piece creating a localized elevation surrounded by the lower base regions.

Clearly the above is a proper definition for Applicants' random surface features. Therefore, the Examiner should not have given the broadest reasonable interpretation outside of Applicants' definition in their specification. In addition, Applicants point out how their snack pieces compare to Pringles Ridges ® (i.e., one member of the AAPA): "The definition of random surface features as found in the present invention do not include patterned surface features such as those found in Ridges ®."⁶ By this statement, Applicants' specification expressly teaches against Ridges® and such should not have been applied against Applicants' claims.

In another assertion herein, the Examiner states that "the individual surfaces of the ridges and/or snack pieces would have possessed some degree of 'random surface features' when viewed closely enough since they are conventionally fried in cooking oil which was well known to provide surface bubbles and blisters." [Emphasis added]. Applicants respectfully disagree with this statement, and in particular the underlined portion thereof. As it states in Applicants' definition for their random surface features, the surface features are visibly recognizable.⁷

⁴ 37 CFR § 104(d)(2); MPEP 2144.03.

⁵ Id.

⁶ Applicants' Specification at page 21, lines 14-16.

⁷ Id. at page 21, line 2.

Conventional understanding for visual recognition relates to an ordinary visual perception with the eyes that does not include one's straining to see or enhancement of said vision by artificial means; e.g., by a microscope. Applicants' random surface features do not require recognition "when viewed closely enough" because they are recognizable by the ordinary perception of the naked eye. The Examiner's assertion, i.e., "when viewed closely enough", infers some additional work and/or magnification of vision to view random surface features that are not visibly recognizable in the AAPA. This is not required to perceive the random surface features of Applicants' snack pieces.

Therefore, Applicants respectfully request reconsideration and allowance of Claims 1-3, 10, 12-15 and 23 over the Examiner's 35 U.S.C. § 102(a) rejection.

Claims 1, 3, 10, 12-13, 21-22 and 28 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Carey, et al. (U.S. Patent No. 5,747,092). The Examiner asserts that Carey '092 comprises overlapping non-planar snack pieces with random surface features.

Claim 1 has been amended to include the subject matter of now canceled Claim 4; namely, that the snack piece of Claim 1 has a concave-curvature. This is an element that Carey '092 does not teach and is therefore missing. Also, Claims 21 and 28 have been amended to add the "concave-curved" element to them.

In addition, Applicants contend that Carey '092 does not teach an 'overlapping' snack piece. In fact, Applicants assert that though non-planar, Carey '092 is substantially restricted in two dimensions (i.e., substantially flat) except for surface bubbles that rise upwardly from the surface of the snack piece into a third plane. Carey '092 does not teach stacking their snack pieces in an overlapping fashion, and the Examiner has not pointed to such within the reference itself--thus, this element is completely missing from Carey '092. Applicants contend that the snack pieces of Carey '092 cannot be overlapped in the manner of Applicants' snack pieces. Also, Applicants contend that the Examiner's assertion that Carey '092 provides an overlapping snack piece is not founded in Carey '092 itself and is therefore based upon the Examiner's own personal knowledge. Since the Examiner's assertion is based upon personal knowledge Applicants respectfully request an affidavit that properly validates the Examiner's 'overlapping' assertion.

Thus, Applicants respectfully request that the Examiner reconsider and allow Claims 1, 3, 10, 12-13, 21-22 and 28 over the Examiner's 35 U.S.C. § 102(b) rejection. Applicants point out that if the affidavit is not forthcoming from the Examiner, this rejection must be rescinded.

35 U.S.C. § 103 Rejection

Claims 8 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the AAPA.

The Examiner states that “[i]t would have been obvious to one of ordinary skill in the art to use a snack piece density of 1 to 17×10^{-4} g/mm³ in the product of AAPA since this would have been done during the course of normal experimentation and optimization, since the AAPA already included a volumetric bulk density of 26 to 59×10^{-5} g/mm³ and a package volumetric bulk density of 13 to 20×10^{-5} g/mm³...and since a dense snack piece would reduce the shipping and storage cost per package.” [Emphasis added.]

Applicants disagree with the Examiner’s assertions and in particular, the underlined portions shown above. Also, the Examiner’s assertions are not based upon the AAPA or any other prior art noted herein. Therefore, Applicants believe that the Examiner’s assertions derive from personal knowledge which Applicants request to be validated by affidavit.

If Applicants traverse an assertion made by the Examiner, the Examiner should cite a reference in support of his position.⁸ When a rejection is based on facts within the personal knowledge of the Examiner, the data should be stated as specifically as possible, and the facts must be supported, when called for by the Applicant, by an affidavit from the Examiner.⁹ If the Examiner fails to provide a suitable affidavit that bolsters his reasons for rejection herein, the rejection should be withdrawn. Applicants so traverse the Examiner’s rejection based upon these grounds.

In addition, Applicants assert that the AAPA teaches away from Applicants’ claims. The AAPA includes Pringles Ridges® which is specifically disclaimed by Applicants in their specification.¹⁰ Also, as previously noted herein, Applicants assert that the AAPA does not teach or suggest Applicants’ concave-curved snack pieces having random surface features. Lastly, Claim 1 has been amended to include the subject matter of now canceled Claim 4 which is not subject to this rejection for obviousness; i.e., the AAPA does not teach or suggest a snack piece with a concave-curved surface. The AAPA does provide a snack piece having a curved surface, but it is not concave--rather, it is saddle-shaped.

⁸ 37 CFR § 104(d)(2); MPEP 2144.03.

⁹ Id.

¹⁰ Applicants’ Specification at page 21, lines 14-16: “The definition of random surface features as found in the present invention do not include patterned surface features such as those found in Ridges®.” [Emphasis added.]

Given all of the arguments noted above, Applicants respectfully request reconsideration and allowance of Claims 8 and 11 over the Examiner's 35 U.S.C. § 103(a) rejection. Applicants point out that if an affidavit substantiating those items asserted within the personal knowledge of the Examiner is not provided, the Examiner's rejection must be obviated.

Claims 8 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Carey '092. The Examiner asserts that Carey '092 provides an overlapping snack piece that is non-planar.

In fact, Applicants assert that though non-planar, Carey '092 is substantially restricted in two dimensions (i.e., substantially flat) except for surface bubbles that rise upwardly from the surface of the snack piece into a third plane. Carey '092 does not teach stacking their snack pieces in an overlapping fashion, and the Examiner has not pointed to such within the reference itself--thus, this element is completely missing from Carey '092. Applicants contend that the snack pieces of Carey '092 cannot be overlapped in the manner of Applicants' snack pieces. Also, Applicants contend that the Examiner's assertion that Carey '092 provides an overlapping snack piece is not founded in or suggested by Carey '092 itself and is therefore based upon the Examiner's own personal knowledge. Since the Examiner's assertion is based upon personal knowledge Applicants respectfully request an affidavit that properly validates the Examiner's 'overlapping' assertion.

Applicants respectfully contend that Carey '092 does not teach or suggest an overlapping concave-curved snack piece. Claim 1 now claims a snack piece that is concave-curved--this derives from the subject matter of now canceled Claim 4. The rejection of Claims 8 and 11 should therefore be obviated since the Examiner's rejection did not include Claim 4 or the subject matter thereof.

Applicants therefore respectfully request reconsideration and allowance of Claims 8 and 11 over the Examiner's 35 U.S.C. § 103(a) rejection.

Claims 5-7 and 16-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the AAPA in view of Fink, et al. (U.S. Patent No. 6,129,939).

As noted above, the AAPA teaches away from Applicants' claims and also does not teach or suggest Applicants' random surface features. This teaching away is not cured by the combination of the AAPA and Fink '939. Also, the combination of the AAPA and Fink '939 does not teach or suggest Applicants' random surface features as has been duly noted herein.

Also, Applicants disagree that a saddle shaped snack piece (i.e., the AAPA) suggests a bowl-shaped snack piece. In fact, Applicants assert that one of skill in the art looking at both the AAPA and Fink '939 would not be motivated to combine the teachings of each to meet Applicants' claims. More specifically, Applicants assert that a saddle-shaped snack piece does not suggest a bowl-shaped snack piece since both shapes are so inherently different. The Examiner has provided no motivation within the references themselves to properly conclude that such motivation does exist. Applicants therefore believe that such assertions stem only from the Examiner's personal knowledge and are not founded in the prior art or in any other reference. Therefore, Applicants respectfully request an affidavit that validates the source of the Examiner's assertions.

Therefore, Applicants respectfully request reconsideration and allowance of Claims 5-7 and 16-20 over the Examiner's 35 U.S.C. § 103(a) rejection. Applicants point out that if an affidavit substantiating those items asserted within the personal knowledge of the Examiner is not provided, the Examiner's rejection must be rescinded.

Claims 9, 21-22 and 28-29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the AAPA in view of Carey '092.

As noted above, the AAPA teaches away from Applicants' claims. The combination of the AAPA and Carey '092 also teaches away from Applicants' claims. In addition, neither the AAPA or Carey '092 teach or suggest a concave-curved snack piece. The AAPA snack pieces are curved, but not concave; rather, they are saddle shaped. The snack pieces of Carey '092 are substantially flat and are certainly not curved or concave. Concavity of a snack piece is not suggested by either reference or by their combination. The Examiner's assertions in this regard seem to derive from his personal knowledge and therefore now require, per Applicants' request, validity by affidavit.

Applicants respectfully assert that the combination of the AAPA in view of Carey '092 is improper. Carey '092 provides a baked snack piece and specifically disclaims frying. In fact, Carey '092 states the following: "The avoidance of frying for substantial moisture reduction of the dough pieces permits the attainment of crisp, chip-like snacks having a vegetable shortening or oil or fat content less than 20% by weight of the finished product."¹¹ [Emphasis added.] In contrast, the AAPA neither teaches or suggests baking their snack pieces and merely provides a snack piece that is fried.

¹¹ U.S. Patent No. 5,747,092 (Carey, et al.): column 4, lines 49-53.

Based upon Carey's stated avoidance of fried snack pieces, Applicants assert that 1) any combination of Carey '092 with a reference that teaches frying without any suggestion of baking is improper, and 2) one of skill in the art, due to Carey's avoidance of frying, would not have been motivated to combine the AAPA and Carey '092 since baking does not suggest specifically disclaimed frying.

It is well known in the art that frying and baking can cause drastically different transformations to food. It is also well known that the end products from each process are often quite different and severe. For example, the texture, taste, size, mouth-feel and lipid content are universally regarded to be quite different between a potato that has been fried and one that has been baked. For these reasons, combining a reference for baking that specifically disclaims and seeks to avoid frying with a reference that maintains frying as a core transformation is improper.

Therefore, Applicants respectfully request reconsideration and allowance of Claims 14, 23 and 29 over the Examiner's 35 U.S.C. § 103(a) rejection.

Claims 4-7 and 15-19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Carey '092 in view of Fink '939. Claim 4 has been canceled without prejudice. Claims 5-7 and 15-19 are pending herein.

Applicants respectfully assert that the combination of Casey '092 in view of Fink '939 is improper. Carey '092 provides a baked snack piece and specifically disclaims frying. In fact, Carey '092 states the following: "The avoidance of frying for substantial moisture reduction of the dough pieces permits the attainment of crisp, chip-like snacks having a vegetable shortening or oil or fat content less than 20% by weight of the finished product."¹² [Emphasis added.] In contrast, Fink '939 neither teaches or suggests baking their snack pieces and merely provides a snack piece that is fried.

Based upon Carey's stated avoidance of fried snack pieces, Applicants assert that 1) any combination of Carey '092 with a reference that teaches frying without any suggestion of baking is improper, and 2) one of skill in the art, due to Carey's avoidance of frying, would not have been motivated to combine Carey '092 and Fink '939 since baking does not suggest specifically disclaimed frying.

It is well known in the art that frying and baking can cause drastically different transformations to food. It is also well known that the end products from each process are often quite different and severe. For example, the texture, taste, size, mouth-feel and lipid content are

¹² U.S. Patent No. 5,747,092 (Carey, et al.): column 4, lines 49-53.

universally regarded to be quite different between a potato that has been fried and one that has been baked. For these reasons, combining a reference for baking that specifically disclaims and seeks to avoid frying with a reference that maintains frying as a core transformation is improper.

Applicants therefore respectfully request reconsideration and allowance of Claims 5-7 and 15-19 over the Examiner's 35 U.S.C. § 103(a) rejection.

Claims 14, 23 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Carey '092 in view of the AAPA.

As noted above, the AAPA teaches away from Applicants' claims. No combination of any prior art with the AAPA is therefore proper. Furthermore, Claim 14 depends upon Claim 1 which has been amended to include the subject matter of now canceled Claim 4. Also, as noted herein above, neither Carey '092 or the AAPA teach or suggest Applicants' concave-curved snack pieces. The Examiner argues that Carey '092 is non-planar, but Applicants contend that Carey '092 does not possess a concave-curvature. Similarly, Applicants contend that the AAPA, while being curved in certain respects, is not concave but rather saddle-shaped.

Applicants respectfully assert that the combination of the AAPA in view of Carey '092 is improper. Carey '092 provides a baked snack piece and specifically disclaims frying. In fact, Carey '092 states the following: "The avoidance of frying for substantial moisture reduction of the dough pieces permits the attainment of crisp, chip-like snacks having a vegetable shortening or oil or fat content less than 20% by weight of the finished product."¹³ [Emphasis added.] In contrast, the AAPA neither teaches or suggests baking their snack pieces and merely provides a snack piece that is fried.

Based upon Carey's stated avoidance of fried snack pieces, Applicants assert that 1) any combination of Carey '092 with a reference that teaches frying without any suggestion of baking is improper, and 2) one of skill in the art, due to Carey's avoidance of frying, would not have been motivated to combine the AAPA and Carey '092 since baking does not suggest specifically disclaimed frying.

It is well known in the art that frying and baking can cause drastically different transformations to food. It is also well known that the end products from each process are often quite different and severe. For example, the texture, taste, size, mouth-feel and lipid content are universally regarded to be quite different between a potato that has been fried and one that has

¹³ U.S. Patent No. 5,747,092 (Carey, et al.): column 4, lines 49-53.

been baked. For these reasons, combining a reference for baking that specifically disclaims and seeks to avoid frying with a reference that maintains frying as a core transformation is improper.

Therefore, Applicants respectfully request reconsideration and allowance of Claims 14, 23 and 29 over the Examiner's 35 U.S.C. § 103(a) rejection.